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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,250	12/21/2000	Dimitris Katsamberis	60,137-162	9508
26096	7590	03/31/2004		
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			EXAMINER PIZIALI, ANDREW T	
			ART UNIT 1771	PAPER NUMBER

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/747,250

### Applicant(s)

KATSAMBERIS ET AL.

### Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-13 and 16-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-4,9-11,16-21 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5,6,8,12,13,22-32 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed on 2/11/2004 has been entered. The examiner has withdrawn the claim objections of claims 1 and 16. The examiner has withdrawn the 35 USC 112 rejections of claims 1-19.

***Election/Restrictions***

2. Claims 1-4, 9-11 and 16-21 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: In originally filed claims 5-8, the applicant claimed an article wherein a layer is on the layer comprised of a refractory metal compound. In current claim 1, the applicant claims an article wherein the layer comprised of a refractory metal compound is uncoated.

3. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-4, 9-11 and 16-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

4. Claims 21 and 33 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: In originally filed claim 4, the applicant claimed an article wherein a layer is intermediate the layer comprised of polymer and the color layer. In current claims 21 and 33, the applicant claims an article wherein the color layer is directly on the polymer layer.

5. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

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on the merits. Accordingly, claims 21 and 33 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Objections***

6. Claims 5-6 and 12-13 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. As the current specification teaches (page 11, lines 21-24), the reaction products of a metal or metal alloy, oxygen and nitrogen are comprised of the metal or metal alloy oxide, metal or metal alloy nitride and metal or metal alloy oxy-nitride.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-6, 8, 12-13, 22-24, 26-28, 30-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,132,889 to Welty et al. (hereinafter referred to as Welty) in view of USPN 6,154,311 to Simmons, Jr. et al. (hereinafter referred to as Simmons Jr.)

Regarding claims 5-6, 8, 12-13, 22-24, 26-28, 30-32 and 34, Welty discloses an article (column 1, lines 9-26) having on at least a portion of a surface a multi-layer coating (column 1, lines 42-64) comprising a nickel layer with a refractory metal layer deposited on the nickel layer. A refractory metal compound layer, such as zirconium nitride or titanium nitride (column 4, lines

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34-48), is deposited on the refractory metal layer. Deposited on the refractory metal compound layer is a layer comprised of a refractory metal oxide, refractory metal alloy oxide, or the reaction products of a refractory metal or refractory metal alloy, oxygen and nitrogen (column 5, lines 11-48).

Welty discloses that the nickel layer provides improved corrosion protection and functions as a leveling layer that tends to cover or fill in imperfections on the substrate (column 3, lines 23-48). Welty does not mention a polymer layer, but Simmons Jr. discloses the use of a polymer layer, in place of a nickel layer, in articles such as faucets, to provide improved corrosion resistance and to level substrates by forming a smooth hard surface (column 2, lines 9-45 and column 6, lines 15-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the nickel layer of Welty, with a polymer layer, as taught by Simmons Jr., because the polymer layer provides a viable alternative to electroplating in addition to providing corrosion resistance while leveling a substrate by forming a smooth hard surface.

Regarding claim 28, Welty discloses that the color and protective layer may provide a brass color (column 1, lines 29-41 and column 4, lines 49-54).

Regarding claims 30-31, Welty discloses that the article may be a faucet or doorknob (column 1, lines 9-26).

Regarding claim 32, Welty discloses that the electroplated layer may be directly on the surface of the article (column 2, lines 24-59).

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Regarding claim 34, Welty discloses that the layer comprised of the reaction products of a refractory metal or refractory metal alloy, oxygen and nitrogen may be directly on the color layer (column 5, lines 11-48).

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Welty in view of Simmons Jr. as applied to claims 5-6, 8, 12-13, 22-24, 26-28, 30-32 and 34 above, and further in view of USPN 4,143,009 to Dewey.

Simmons Jr. does not specifically mention using an epoxy urethane as the polymer layer, but Dewey discloses that a polymer comprising epoxy urethane is generally tough, hard, and rigid (column 3, lines 21-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select epoxy urethane as the polymeric base coat material, because epoxy urethane is a suitable polymer capable of forming a smooth hard surface over the covered article.

10. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welty in view of Simmons Jr. as applied to claims 5-6, 8, 12-13, 22-24, 26-28, 30-32 and 34 above, and further in view of USPN 6,196,936 to Meckel.

Welty discloses that the color and protective layer may have any desired color (column 4, lines 48-54), but fails to specifically mention nickel color. Meckel discloses refractory metal nitrides, such as chromium nitride and di-titanium nitride, and a refractory metal alloy nitride, titanium aluminum nitride, having the appearance of silver or lustrous gray (column 8, lines 2-15). Silver, lustrous gray, and nickel colors are essentially the same. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the refractory metal compounds or refractory metal alloy compounds of Meckel as the color and

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protective layer of Welty, because such a material selection would achieve a commercially desirable conventional nickel color faucet finish. The examiner takes Official Notice that faucets with the finishes of brass and nickel are obvious alternative finishes in the faucet art.

***Response to Arguments***

11. Applicant's arguments filed 2/11/2004 have been fully considered but they are not persuasive.

The applicant asserts that neither Welty nor a combination of the references teach or suggest an article having an uncoated refractory metal or refractory metal alloy layer. The examiner asserts that the applicant does not claim an article having an uncoated refractory metal or refractory metal alloy layer. Rather, in non-elected claim 1, the applicant claims an article having an uncoated refractory metal compound or refractory metal alloy compound layer. Regardless, applicant's argument is moot based on said claim being non-elected.

The applicant asserts that there is no suggestion or motivation to replace the nickel layer of Welty with a polymer layer. The examiner respectfully disagrees. Although Welty does not mention a polymer layer, Simmons Jr. discloses the use of a polymer layer, in place of a nickel layer, in articles such as faucets, to provide improved corrosion resistance and to level substrates by forming a smooth hard surface (column 2, lines 9-45 and column 6, lines 15-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the nickel layer of Welty, with a polymer layer, as taught by Simmons Jr., because the polymer layer provides a viable alternative to electroplating in addition to providing corrosion resistance while leveling a substrate by forming a smooth hard surface.

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The applicant asserts that Welty teaches against using a polymer layer in the multi-layer coating because Welty teaches that acrylics, urethanes and epoxies have been used alone as a coating but a drawback is that they do not provide wear resistance (column 1, lines 9-26). The examiner respectfully disagrees. The polymer layer taught by Simmons Jr. is used in a completely different manner than the polymer layer mentioned by Welty. The polymer layer of Simmons Jr. replaces an electroplated layer and would be buried within the multi-layer coating away from the surface of the coating. The polymer layer mentioned by Welty is a protective outer layer that is used without a multi-layer coating. Welty teaches that when a polymer protective outer layer is deposited on an article surface, without a multi-layer coating present, the polymer layer is susceptible to attack from the outside environment. This teaching is irrelevant to the polymer layer taught by Simmons Jr., because that polymer layer is not on the surface of the article and therefore is not susceptible to attack from the outside environment. Welty does not teach against using a polymer layer in a multi-layer coating, rather, Welty teaches against omitting a multi-layer coating and simply applying an outer protective polymer layer.

The applicant asserts that Welty teaches against the replacement of the nickel layer with a polymer layer because Welty discloses that the nickel layer may be "spectacularly bright" if brighteners are added to the electroplating baths (column 2, lines 23-59). The examiner respectfully disagrees. Assuming *arguendo*, that a polymer layer is not capable of being spectacularly bright, Welty discloses that brighteners may be "optionally" added to electroplating baths (column 2, lines 23-59). Clearly, "spectacularly bright" electroplated layer are not essential to the invention of Welty.



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The applicant asserts that if the color layer of Welty was nickel in color, the brass color feature of Welty would be ruined and therefore there is no motivation to employ a nickel color layer. The examiner respectfully disagrees. Welty discloses that the color and protective layer may have any desired color (column 4, lines 48-54), but fails to specifically mention nickel color. Meckel discloses refractory metal nitrides, such as chromium nitride and di-titanium nitride, and a refractory metal alloy nitride, titanium aluminum nitride, having the appearance of silver or lustrous gray (column 8, lines 2-15). Silver, lustrous gray, and nickel colors are essentially the same. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the refractory metal compounds or refractory metal alloy compounds of Meckel as the color and protective layer of Welty, because such a material selection would achieve a commercially desirable conventional nickel color faucet finish. The examiner takes Official Notice that faucets with the finishes of brass and nickel are obvious alternative finishes in the faucet art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

g-B. 3/17/04

**ANDREW T. PIZALI**  
**PATENT EXAMINER**



**TERREL MORRIS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**